

Message

From: Fennessy, Christopher [christopher.fennessy@Rocket.com]
Sent: 6/23/2017 4:00:22 PM
To: Keller, Lynn [Keller.Lynn@epa.gov]
CC: Timothy Davis (TDavis@Geosyntec.com) [TDavis@Geosyntec.com]
Subject: RE: [EXTERNAL] Ambient air sampling at A40

Ok. We have an on-site Met station that should be sufficient for this purpose. The temperature difference between Aerojet and Area 40 should not be more than a degree and average temperature over the 2 week period will be minimal.

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From: Keller, Lynn [mailto:Keller.Lynn@epa.gov]
Sent: Thursday, June 22, 2017 4:01 PM
To: Fennessy, Christopher
Subject: [EXTERNAL] RE: [EXTERNAL] Ambient air sampling at A40

Hi, Chris.

Yes, the diffusion membrane in the sampler has a temperature dependent constant in the uptake rate equation. The lab needs the temperature data to enter it into the equation and determine uptake volume. If no temperature data is provided, the lab will default to 75 degrees F, which could make up to a 10% difference in results.

From the Radiello web site ([https://www.sigmaaldrich.com/content/dam/sigma-aldrich/docs/Sigma/General Information/radiello bro 2nd ed 2007.pdf](https://www.sigmaaldrich.com/content/dam/sigma-aldrich/docs/Sigma/General%20Information/radiello_bro_2nd_ed_2007.pdf))

Uptake rates are dependent on temperature; therefore, concentration values obtained during sampling will be more accurate if precise temperature values are recorded during sampling. Note that temperature variations of 4-5 °C can be recorded from one area of an urban population to another.

Regarding the shelter for the sampler, yes, the purpose of the shelter is to keep the sampler out of direct sunlight for one, since it can reach very high temperatures otherwise and impact results. The shelter also keeps out moisture, rainfall, nibbling squirrels, defecating birds, etc. There's a picture of a shelter that Supelco sells in the link above, or you could construct your own roofed shelter.

I'll be sending over our recommendations for the ambient air sampling shortly...

Thanks,
Lynn

Lynn M. Keller, EI, PMP

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From: Fennessy, Christopher [<mailto:christopher.fennessy@Rocket.com>]
Sent: Wednesday, June 21, 2017 8:23 PM
To: Keller, Lynn <Keller.Lynn@epa.gov>
Subject: RE: [EXTERNAL] Ambient air sampling at A40

Ok. Can you provide some information on how the lab uses temperature to determine uptake rate?

Also, what will the shelter provide? Are we trying to prevent damage? Reduce temperature? Avoid direct sunlight?

-----Original Message-----

From: Keller, Lynn [Keller.Lynn@epa.gov]
Sent: Wednesday, June 21, 2017 05:04 PM Pacific Standard Time
To: Fennessy, Christopher
Subject: [EXTERNAL] Ambient air sampling at A40

Hi,Chris. I'm meeting with Mat and Dan in the morning to agree on a few guidance points-I'll get you input tomorrow afternoon.

Please note these items we all agree on now though:

They should at least be monitoring temperature locally so the lab can use actual uptake rates.

The samples should be partially sheltered.

Thanks,
Lynn